



Section 26: Cranes and Rigging

1. General Information

- 1.1 Contractors whose activities require the use of cranes are responsible for proper set up and operation. Evidence of up-to-date crane inspections (annual) must be provided to EQ prior to use. Cranes may be rejected for any defect, no matter how minor.
- 1.2 This procedure applies to the following types of cranes: crawler cranes, locomotive cranes, wheel mounted cranes of both truck and self-propelled wheel type, and any variations that have the same fundamental characteristics. This procedure also applies to other powered vehicles that may be used to hoist or lift equipment or material that breaks the roof line. All lift plans must contain a section regarding handling emergencies should a crane collapse, turn over, or drop a load.
- 1.3 All lifts that require material or equipment to break a roof line require prior notice to staff and employees who may be affected. This will be accomplished by the contractor proposing to conduct the work, the project engineer or the EQ representative contacting the appropriate facility supervisor or representative to initiate notification to all affected employees. Notification requirements will be accomplished by using the EQ representative.
- 1.4 All lifts which require breaking a roof line require a lift plan. Lift plans will be submitted no later than 2 week prior to the lift. Lift plans must be approved by the EQ representative and EHS manager. Lift plans must contain crane, rigging, and load details as well as sketches or electronic drawings that include both a plan view showing swing direction and crane placement with respect to the facility and a crane elevation showing the boom angle and extension extremes of the lift.

If a material or equipment lift does not require a formal lift plan according to the above criteria, a Job Hazard Analysis of the lift must be performed prior to the lift. Evidence of such an analysis may be demanded at any time by the EQ representative or EHS manager.

For all lifts, a pre-lift meeting shall be conducted for all personnel involved with, or in the area of, the lift so that all are aware of the planned activity and the potential hazards associated with the lift.

- 1.5 Prior to any lift, contractors will provide the EQ EHS manager, the project manager, or the EQ representative with documented evidence of an annual inspection in accordance with OSHA requirements for all cranes, hoisting, and associated rigging equipment brought onto the site. If the inspection record is not produced, if 1 year has elapsed since the last inspection, or if the crane or its associated rigging exhibits any damage or excessive wear, the crane cannot be used.
- 1.6 The crane operator or other competent person will perform a daily inspection of cranes in accordance with OSHA requirements. The person performing this inspection will document results in writing, and documentation will be available for examination upon request. In addition to daily inspections, if a crane is moved or the process changes during operations it must be re-inspected prior to performing the lift in order to reflect the changes.

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- 1.7 A third-party crane inspection is required for all critical lifts. A critical lift may include, but is not limited to:
- A. Any lift exceeding 75% of the crane's rated capacity at the required lifting configuration;
 - B. Any lift that requires the use of more than one crane or is made in combination with other lifting equipment;
 - C. Any lift located in an area where there is exposure to electrical hazards, overhead piping systems, vessels, operational buildings, etc.

A critical lift may also involve the lifting of specialized equipment which has been designed, engineered or fabricated for a specific process or function, the loss of which would severely impact a project. The determination of what constitutes a critical lift shall be made by the EHS manager in consultation with the EQ representative on the basis of the submitted lift plan.

- 1.8 At no time will any lift be made over occupied space. In addition, all lifts over occupied space shall be conducted before or after normal EQ site working hours and weekends. A lift will be made during normal working hours only under certain circumstances and only with approval of the EQ EHS manager. At no time will lifts be made over personnel, active roadways, moving or parked vehicles.

2. Recordkeeping

- 2.1 Records pertaining to crane inspections will be kept on site with the crane or in the contractor's temporary office.
- 2.2 The crane operations and maintenance manual shall be available for inspection at each crane or hoisting equipment.

3. Operator Qualifications and Operating Procedures

- 3.1 Only designated crane operators who have been licensed by an approved agency and who meet the minimum DOT requirements as provided in DOT 391 may operate cranes and hoisting equipment.
- 3.2 Rental cranes and other lifting equipment not subject to DOT requirements must have the operator approved by the EQ representative.
- 3.3 No one other than the designated operator will be in or on the crane during operations. Exceptions are oilers or supervisors whose duties may require their presence.
- 3.4 Crane operating procedures must be in accordance with OSHA requirements, 29 CFR 1926.550 Subpart N.

4. Maintenance

Records indicating a preventative maintenance program based on the equipment manufacturer's recommendations must be made available to EQ and be available for inspection if requested.

5. Rigging Requirements

- 5.1 A qualified rigger must inspect rigging equipment prior to each use and immediately remove from service and destroy any damaged or defective slings.
- 5.2 Rigging devices, including slings, must have permanently affixed identification stating size, grade, rated capacity, and manufacturer.
- 5.3 Remove rigging not in use from the immediate work area.
- 5.4 Hang rigging and slings on a rigging frame to eliminate bends and kinks.
- 5.5 Do not leave slings lying on the ground or exposed to dirt or the elements.
- 5.6 Do not shorten slings using bolts, knots, or other devices.
- 5.7 A licensed engineer or the manufacturer must certify lifting beams and spreader bars as to their configuration and lifting capacity.

6. Work Platforms Suspended from Cranes

Cranes may be used to hoist, lower, and suspend personnel on a work platform ONLY when such action results in the least hazardous exposure to employees. This activity must be approved in writing by the EQ EHS manager.